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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,840	03/30/2004	Gen Sasaki	251146US2	2321

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

CUTLER, ALBERT H

ART UNIT	PAPER NUMBER
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2622

NOTIFICATION DATE	DELIVERY MODE
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07/19/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/811,840

Applicant(s)

SASAKI, GEN

Examiner

Albert H. Cutler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

6/27/07

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 ~~1-11~~ is/are pending in the application.
- 4a) Of the above claim(s) 3-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is responsive to application 10/811,840 filed on March 30, 2004. In response to an election of species requirement made by the Examiner, Applicant has elected claims 1 and 2, pertaining to Species I (figures 1 and 2). Claims 1 and 2 have been examined by the Examiner.

Information Disclosure Statement

2. The Information Disclosure Statement (IDS) mailed on May 26, 2004 was received and has been considered by the examiner.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Election/Restrictions

4. Applicant's election with traverse of Species 1 in the reply filed on June 27, 2007 is acknowledged. The traversal is on the ground(s) that a search and examination of the entire application would not place a serious burden on the Examiner, especially in this case where only four species are identified. This is not found persuasive because Species I – IV are not connected in any of design, operation, or effect under the disclosure – the species are independent inventions. Species I contains two parallel buffers serving to transmit data between the RPU and the image compression and

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expansion unit. Species II contains one continuous buffer memory in place of the two parallel buffer memories. As the configuration of Species II does not require the switching of the readout of lines of image data alternately between two buffers, but rather the direct readout through once continuous buffer, Species II requires a separate field of search from the material disclosed in Species I. Species III discloses a display device and signal conversion unit in addition to what is disclosed in Species I. Species III would therefore require a separate search in Class 348, Subclasses 333.01-333.12 and Display Class 345. Species IV discloses two sequential buffers contained in the main memory of an imaging device, as opposed to the two buffers disclosed in Species I or II, which are contained in the main processor of the imaging device. Species IV would thus require search in a separate area. Although the claimed Species I – IV contain material directed to solving similar problems, the claimed features of the independent species are patentably distinct from one another, and prior art used for the basis of the rejection of a single species would most likely not be applicable to the other species due to their unique structural features.

The requirement is still deemed proper and is therefore made FINAL.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura et al.(US 2001/0019362).

Consider claim 1, Nakamura et al. teach:

An image processing apparatus(figure 4) for performing image processing on captured data of an image of a desired subject(paragraphs 44-57), comprising:

an image processing part(211, 212, 232); including:

a buffer memory for data storage("DRAM", 232, paragraphs 60 and 68-78);

an image processing unit(211, figure 4, figures 6A and 6B) for performing a predetermined process on said captured data to obtain image data, and writing said image data to said buffer memory(See paragraphs 84 and 49. The image processing part performs black level correction/white balance processing, color space conversion, etc. The resultant image data is written into the buffer memory(232) after each processing.); and

a compression unit("JPEG", 212) for compressing said image data read from said buffer memory(paragraphs 84 and 50); and

a storage unit("flash ROM", 231) provided outside said image processing part(See figure 4, paragraph 56).

Consider claim 2, and as applied to claim 1 above, Nakamura et al. further teach:

said buffer memory(232) includes a first buffer memory and a second buffer memory(See paragraphs 60 and 68-78. The DRAM(232) has a capacity to store a plurality of images(i.e. has a plurality of buffer memories). The DRAM(232) has a plurality of channels(paragraphs 69-76), which correspond to a plurality buffer memories, so that as an image is being readout from one area of the DRAM, another image can be concurrently written into a different area of DRAM over a different channel.) said image processing apparatus further comprising:

a control unit(21 and 217, figure 4, paragraph 48) being operative in such a manner that while said image processing unit writes said image data either to said first buffer memory or to said second buffer memory, said compression unit selectively reads image data previously stored either in said first buffer memory or in said second buffer memory experiencing no writing of said image data by said image processing unit(See figures 7 and 8, paragraphs 84-99. Nakamura et al. disclose a system in which a first image is captured, subjected to black level correction/white balance correction processing, and written into DRAM(232, see "readout 1", "raw data writing 1", pa, figure 8). This image is stored in DRAM(232) until the capture of the next image. When the next image is captured(pc, figure 8), the first image data is read out of DRAM, subjected to further processing including color space conversion, and written back into DRAM

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over DMA channel 3(paragraph 84). After this data has been written into DRAM, the JPEG section(i.e. compression unit) reads out and compresses the first image data concurrently with the writing of the second image data to the DRAM over DMA channel 1. See figure 8, "readout 2" represents the writing of the second image data from the image sensor into DRAM over channel 1, and "JPEG compression 1" represents the readout of image data from the DRAM over channel 4, which two operations occur simultaneously. Because the DRAM has a capacity to store a plurality of images, and because the DRAM contains a multitude of DMA channels in which data can written to and read from, the readout from and writing to DRAM involves multiple buffer memories which hold different image data.).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Anderson(US 6,137,534) teach of a DRAM containing multiple buffer memories(figure 4a, column 5, lines 35-57).

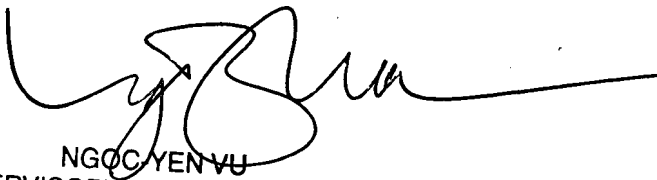
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert H. Cutler whose telephone number is (571)-270-1460. The examiner can normally be reached on Mon-Fri (7:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc-Yen Vu can be reached on (571)-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AC



NGOC YEN VU
SUPERVISORY PATENT EXAMINER